Ordering number: EN 3351A

Monolithic Linear IC

SANYO No.3351A

LA8500, 8501-P

Tone Ringer

Applications

- Telephones and other various types of consumer equipment

Features and Functions

- Adjustable OSC frequency
- On-chip power supply control circuit with hysteresis prevents false triggering and rotary dial "chirps".
- Minimum number of external parts required
- Adjustable operation start voltage (LA8500)
- Adjustable operation start current (LA8501-P)

Maximum Ratings at Ta=25°C

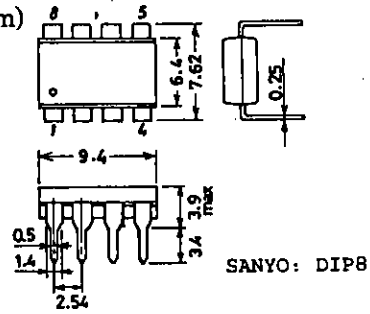
			unit
Maximum Supply Voltage	V_{CC} max	30	V
Allowable Power Dissipation	Pd max	500	mW
Operating Temperature	Topr	-20 to +75	°C
Storage Temperature	Tstg	-55 to +150	°C

Operating Conditions at Ta=25°C

			min	typ	max	unit
Operating Voltage	Vopr				29	V
Operation Start Supply Voltage	Vsi	(Note 1)	17	19	21	V
Operation Sustain Supply Voltage	Vsus	(Note 2)	10.5	12		V
Operation Start Current Dissipation	Isi	No load	1.4	3.3	4.2	mA
Operation Sustain Current Dissipation	Isus	No load		1.0		mA
OSC Frequency (Note 3)	f_L	C1=0.47uF,R1=165kohms	9	10	11	Hz
	f_{H1}	C2=6800pF,R2=191kohms	461	512	563	Hz
	f_{H2}	C2=6800pF,R2=191kohms	576	640	703	Hz
Output Voltage H Level	V_{OH}	V_{CC}=24V,I_{OH}=-10mA,PIN 7=GND	20.0	21.5	22.5	V
L Level	V_{OL}	V_{CC}=24V,I_{OL}=10mA,PIN 7=7V	0.7	1.0	2.0	V
Trigger Pin Operating Voltage (LA8500)	Vtrig	V_{CC}=15V,Itrig=100uA	7.8	10	11.5	V

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Package Dimensions 3001B
(unit : mm)



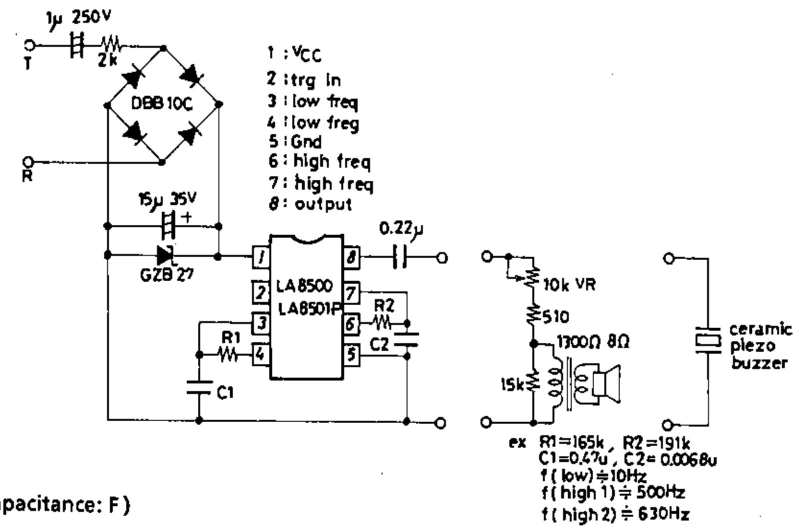
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Note 1: Operation start supply voltage (Vsi) is the value of supply voltage required for the tone ringer to start oscillating.

Note 2: Operation sustain supply voltage (Vsus) is the value of supply voltage required for the tone ringer to maintain oscillation.

Note 3: OSC frequencies are: (1) $f_L = 1/1.234 \cdot R1 \cdot C1$
(2) $f_{H1} = 1/1.515 \cdot R2 \cdot C2$
(3) $f_{H2} = 1.24 \cdot f_{H1}$

Sample Application Circuit



Unit (resistance: Ω, capacitance: F)